

## PRESS RELEASE #2

### **KNOWBOND - EMPOWERING EXCELLENCE OF EUROPEAN ADHESIVE BONDING WORKFORCE**

**EFW January 2024** - After two years of dedicated effort, the KNOWBOND project – Boosting Knowledge of Adhesive Bonding Personnel–has concluded, marking a significant milestone within European Adhesive Bonding (EAB) training. The project aimed to update EAB curricula and develop digital resources, facilitating the certification of individual skills for specific professional activities.

KNOWBOND has not only achieved its objectives but has also paved the way for personalized learning paths, offering new possibilities for the European Adhesive Bonding Workforce to access training. A noteworthy achievement is the active participation of over 100 learners in pilot courses across Germany, Portugal, Austria, Slovenia, and Spain. Additionally, the project engaged a broader audience of 220 stakeholders, including learners, trainers, workers, experts, and public, through face-to-face National Hands-on Seminars and the European Final Conference, providing insights into the project's impactful results.

The project's core impact relies in the development of specific knowledge and skills for Window and Plastic Bonding activities, addressing individual needs that were previously unmet by the existing EAB training program. By effectively reducing the skills mismatch, KNOWBOND successfully bridges the gap by delivering tailored training aligned with the specific demands of the workplace. This achievement empowers professionals to continually grow in their respective roles, ushering in a new era of competence and proficiency in the field of adhesive bonding."

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### **Empowering Skills Development**

KNOWBOND partners have successfully implemented and completed four main results, train the trainers during a capacity building activity, conducted events to raise awareness about the project activities and engaged with the larger amount of people interested in gaining and/or developing specific knowledge about Adhesive Bonding technology.

The new training courses (Specific European Adhesive Bonding Training – SEABT) have been designed in accordance with the current comprehensive EAB qualification, to ensure that new skills are more easily available to those who have acquired them as and when required, thus introducing a cumulative system for EAB curricula.

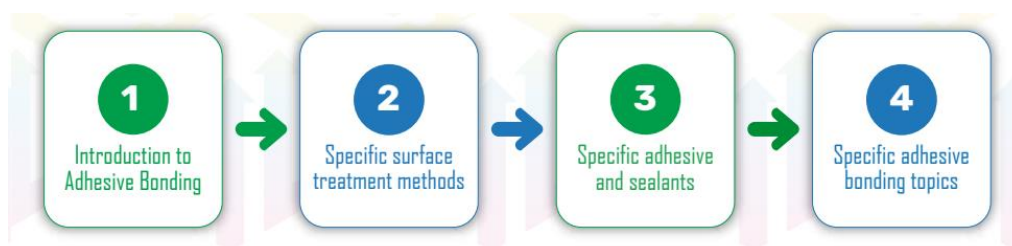


Figure 1 - Competence Units of SEABT course



In general, the SEABT curriculum describes the knowledge, skills, autonomy and targeted responsibility of the person after passing the training. The SEABT qualification consists of a compulsory competence unit (CU1), which is a mandatory part of every SEABT qualification, providing a basic understanding of adhesive bonding principles and topics. The competence units CU2 and CU3 are subdivided in specific subjects which are selectable according to need and client requirement or specific target applications.

PR2 “Tools for flexible learning ” encompass the range digital training materials, developed to support the implementation of a more flexible learning and give trainees a more agile and learner-centred way of achieving the learning outcomes for the SEABT qualification. PR2 toolkit includes exercises using a problem-based learning approach and case studies. The digital resources can be integrated with a Learning Management System (LMS) using SCORM files available in KNOWBOND website.

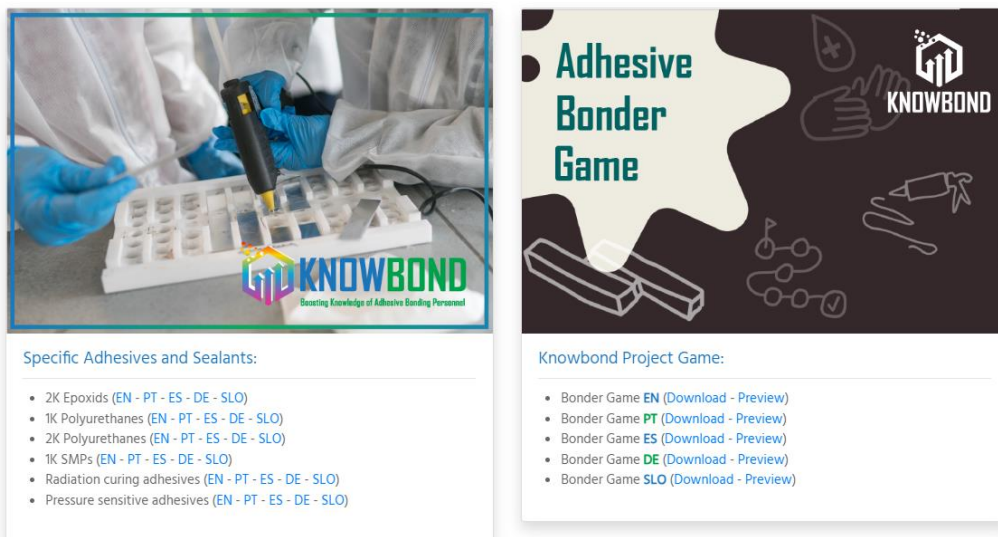


Figure 2 - Preview of Online Digital Resources

PR3 “User-guide for integration into online platforms” described the operational steps to be followed for the integration of KNOWBOND results into the most used learning and management platforms by education and training organisations.

KNOWBOND sets a benchmark with the "Quality Assurance Recommendation Guideline" (PR4). This guideline supports the recognition of SEABT on a global scale, promoting excellence in learning, underpinned by EQAVET and quality assurance principles.



## Rolling out Specific Bonding Training

KNOWBOND's pilot courses for Specific Adhesive Bonding applications (SEABT) were rolled out from July to October 2023, engaging a total of 107 participants across Europe (Germany, Slovenia Austria, Spain and Portugal) and earning high praise for their innovative approach.



*Figure 3 - SEABT Courses (Austria/Portugal)*

In Germany, where the focus was on automotive applications, professionals from the Volkswagen Group actively participated in SEABT courses tailored for assembly line experts involved in window bonding. Their positive feedback highlighted the convenience of online resources, proving invaluable for professionals in demanding roles.

Slovenia witnessed a breakthrough in windshield bonding as a group of 15 participants underwent a comprehensive test of KNOWBOND curricula and tools. The collaboration with key stakeholders, including SŽ-VIT and associated companies, showcased the course's adaptability to industry-specific needs.

Austria hosted a successful piloting event, testing contents and materials developed for SEABT courses with a group of 15 attendees.

In Spain, the SEABT course found diverse applications, attracting participants from both manufacturing and repair/maintenance sectors of the railway industry. The Bonder Game, an engaging online resource, emerged as a standout element, proving that learning can be both enjoyable and effective.

Portugal experienced enthusiastic participation from workers in various industries, including transport, containers, packaging, and tobacco. Students, including master's and doctoral candidates, showcased a deep interest in adhesive bonding, emphasizing the high-quality trainers and the SEABT program's introduction.

Across all countries, trainers lauded KNOWBOND's Excellence, praising the SEABT training course for its well-structured design, comprehensive content, and the perfect balance between theory and practice. The success of the gamified Bonder Game and the availability of robust online training materials added a dynamic and effective dimension to the learning experience.

*Figure 4 - SEABT in Portugal*

## Disseminating Success & Impactful Outreach

Through a series of initiatives, the KNOWBOND project has successfully undertaken 118 dissemination actions, reaching an extensive audience of over 20,700 stakeholders. The project's strategic outreach encompassed various events, showcasing its achievements on both national and international platforms.

Internationally, KNOWBOND gathered attention through key presentations at prestigious events, such as the EWF General Assembly in 2022 and 2023, engaging National Welding Associations from 32 EU countries. The project made its mark at the 3<sup>rd</sup> International Conference on Science and Technology Education (STE Conference, 2022), the Project Final Conference integrated in the 3<sup>rd</sup> International Conference on Advanced Joining Processes (AJP2023), 7<sup>th</sup> International Conference on Adhesive Bonding (AB, 2023), and the 17<sup>th</sup> International Bonding Conference (Austria, 2023), among others. These appearances involved oral and poster presentations, resonating with both academic and industrial communities within advanced joining processes.



Figure 5 - EWF General Assembly (May 2023)



Figure 6 - Final Conference (Braga, 2023)

At the national level, KNOWBOND organized seminars and workshops from May to November 2023, strategically disseminating and exploiting project results among national experts in industry and education.

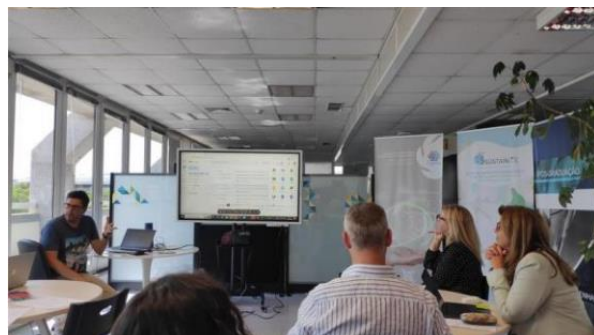


Figure 7 - National Seminar





*Figure 8 KNOWBOND National Seminars*

Notable among these events, was KNOWBOND's presence at MetalMadrid in Spain on November 15<sup>th</sup>, 2022. The seminar, attended by industrial representatives, SME specialists, and education organization representatives, played a pivotal role in expanding the reach of the project's accomplishments. Flyers distributed during the seminar further bolstered the promotion of the project's sustainability.

In Germany, at Fraunhofer IFAM in Bremen, a diverse audience comprising participants from various industrial domains, including automotive, shipbuilding, railway, adhesive suppliers, and military equipment providers, expressed their appreciation for the adaptability of curricula and materials to individual needs.

The availability of online training materials received high praise as a delivery method, with quizzes and learning controls affirming the success of the courses in disseminating innovative training methodologies.



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## Looking Ahead

KNOWBOND project, focused on advancing European Adhesive Bonding (EAB) training, concluded with remarkable positive outcomes for its partners. The project enhanced partners' pedagogical, technical, and cooperative capabilities, augmenting their portfolio of best practices through international collaboration. Partners also gained valuable experience in creating online materials, facilitating more flexible and high-quality vocational education and training (VET).

Beyond the benefits for the partnership, KNOWBOND directly influenced operational staff in industries utilizing adhesive bonding. The project's impact extends to those engaged in a limited spectrum of activities, enabling them to benefit from updated EAB training.

While the formal project has concluded, its effects persist through the KNOWBOND website, social media accounts, integration into the International Adhesive Qualification System managed by EWF, and the incorporation of KNOWBOND SEABT and digital resources. All results were designed for sustained use post-project, with potential integration into consortium partners' online learning platforms. This innovative approach ensures the continued utilization of KNOWBOND outcomes in future training and qualification offerings, harmonizing practices across Europe.

The Recommendations Quality Assurance Guidelines (PR4) facilitates the exploitation and transferability of the project's approach, supporting the implementation of updated EAB curricula in various countries. The enduring impact of KNOWBOND ensures a lasting legacy in the field of adhesive bonding education and training.

For further information, visit the KNOWBOND project website or contact us.

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